



# CITY OF SNOHOMISH

*Founded 1859, Incorporated 1890*

116 UNION AVENUE □ SNOHOMISH, WASHINGTON 98290 □ TEL (360) 568-3115 FAX (360) 568-1375

## NOTICE OF SPECIAL MEETING

### SNOHOMISH CITY COUNCIL

in the  
George Gilbertson Boardroom  
1601 Avenue D

**TUESDAY**  
**September 20, 2016**  
**6:00 p.m.**

## WORKSHOP AGENDA

- 6:00 1. **CALL TO ORDER**
2. **DISCUSSION ITEM** – Utility Rate Structure (*P.1*)
- 6:55 3. **ADJOURN**



## **DISCUSSION ITEM 2**

**Date:** September 20, 2016  
**To:** City Council  
**From:** Jennifer Olson, Finance Director  
**Subject:** Utility Rates - Discussion

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**PURPOSE:** The purpose of this workshop is for City Council to discuss the current water, wastewater and storm water rates (See Attachment A). Water and wastewater rates contain a base rate, which includes 4 units of consumption and a volume rate for every unit of consumption used over 4 units. Storm water rates are based on Equivalent Residential Unit (ERU) or Impervious Surface Unit (ISU). This workshop is intended to be interactive and a hands-on review of wastewater rates and unit consumption scenarios, with the expectation City Council will provide staff with policy direction on future rate structure and the setting of rates for 2017 through 2019.

**BACKGROUND:** The City supplies water to customers and calculates consumption through water meters with readings taken bi-monthly. Wastewater charges are based on water usage with the exception of summer months where wastewater charges are based on winter use or typically known as the winter average. Storm water units are based on property size and amount of impervious surface that affects storm water runoff. Consolidated bill statements are generated for two-months of household consumption and include charges for water, wastewater, storm water, garbage, recycling and yard waste.

**ANALYSIS:** Historically, utility rates have been set in three-year cycles typically after a rate study has been conducted to analyze the sufficiency of revenues to meet operating expenses, operating reserve requirements, debt service obligations and the capital infrastructure costs associated with municipal water, wastewater and storm water systems. For 2014-2016 rate setting, the City contracted with FCS for an analysis of water, wastewater and storm water rates for the current 3-year period.

### **Water Rates**

For 2017-2019 water rate setting, rates were analyzed by the FCS Group as part of the study to determine feasibility of closing the water treatment facility and purchasing all the City's water from the City of Everett. Water rates were recommended by the consultant to increase 2.25% each of the three years. No analysis of the water rate structure – base or overage charges – was part of the study (See Attachment B). The table below is historical water base and volume rates charged since 2005:

## **DISCUSSION ITEM 2**

Historical Water Rates					
Year	Base	Volume Per Unit	Units in Base	% Chg in Base	% Chg in Volume
2005	\$ 17.65	\$ 1.95	8		
2006	\$ 18.50	\$ 2.15	8	5%	10%
2007	\$ 39.30	\$ 2.50	8	112%	16%
2008	\$ 39.30	\$ 2.68	4	0%	7%
2009	\$ 39.30	\$ 3.00	4	0%	12%
2010	\$ 39.30	\$ 3.24	4	0%	8%
2011	\$ 39.30	\$ 3.63	4	0%	12%
2012	\$ 41.26	\$ 3.81	4	5%	5%
2013	\$ 42.92	\$ 3.96	4	4%	4%
2014	\$ 45.06	\$ 4.16	4	5%	5%
2015	\$ 47.32	\$ 4.36	4	5%	5%
2016	\$ 49.68	\$ 4.58	4	5%	5%
2017	\$ 50.80	\$ 4.68	4	2.25%	2.25%
2018	\$ 51.94	\$ 4.79	4	2.25%	2.25%
2019	\$ 53.11	\$ 4.90	4	2.25%	2.25%
			Overall	148%	96%

### **Wastewater Rates**

In October 2015, as part of the 2016 budget development process, staff provided an overview of the Utility Enterprise Funds and their financial condition and discussed with the City Council the potential for paying off certain utility debt obligations. A wastewater fund cash flow analysis was conducted, in-house, taking into account future rate generated revenues, connection charges based on existing developments, operational cost inflation, revised future capital projects and fund reserves. The USDA wastewater bond was paid off in November 2015.

In March 2016, the City Council conducted a workshop on the current state of the wastewater treatment facility and collection system. For many years, the City was under an agreed order with the Department of Ecology to update and improve the City's wastewater system or risk being required to send all wastewater to the City of Everett at a significant cost to City wastewater customers. The City made significant improvements to the system and is no longer under this order. However, wastewater capital infrastructure is always in need of system improvements and a ten-year capital investment plan was updated to ensure that the City stays compliant with all regulatory agencies.

With the updated wastewater system capital projects, staff updated the October 2015 cash flow analysis and debt review to determine the level of annual revenues necessary to ensure that future resources are available for capital investments as well as sufficient funds for operations, maintenance and debt service coverage. The City Council reviewed the current state of the wastewater treatment system and future capital infrastructure improvement needs and directed staff to prepare a wastewater rate resolution that reduced wastewater rates by 10% (See Attachment C). A draft resolution and staff report was prepared for the August 16<sup>th</sup> City Council agenda, but was cancelled due to a request to review historical wastewater rate increases and a proposal (See Attachment D) to modify the rate structure to restore past wastewater rate increases that negatively affected lower consumption water and wastewater consumers.



## **DISCUSSION ITEM 2**

The table below is the historical wastewater base and volume rates charged since 2005:

<b>Historical Wastewater Rates</b>					
<b>Year</b>	<b>Base</b>	<b>Volume per Unit</b>	<b>Units in Base</b>	<b>% Chg in Base</b>	<b>% Chg in Volume</b>
2005	\$ 69.50	\$ 2.90	8		
2006	\$ 72.30	\$ 3.70	8	4%	28%
2007	\$ 72.30	\$ 3.70	8	0%	0%
2008	\$ 87.74	\$ 3.10	4	21%	-16%
2009	\$ 105.00	\$ 3.91	4	20%	26%
2010	\$ 105.00	\$ 3.91	4	0%	0%
2011	\$ 113.40	\$ 4.78	4	8%	22%
2012	\$ 125.98	\$ 5.31	4	11%	11%
2013	\$ 139.98	\$ 5.90	4	11%	11%
2014	\$ 139.98	\$ 5.90	4	0%	0%
2015	\$ 139.98	\$ 5.90	4	0%	0%
2016	\$ 139.98	\$ 5.90	4	0%	0%
2017	\$ 125.98	\$ 5.31	4	-10%	-10%
2018	\$ 125.98	\$ 5.31	4	0%	0%
2019	\$ 125.98	\$ 5.31	4	0%	0%
Overall Change				65%	72%

Staff has prepared a wastewater rate analysis tool where many scenarios of base rate and volume rates can be assessed. See Attachment E for an example of the wastewater rate analysis tool. A variety of rate scenarios will be demonstrated during the workshop and staff will seek council policy direction on setting the wastewater rate structure. Wastewater rates options for City Council consideration may be:

- **Fixed bi-monthly charge.** This rate structure would mean all customers pay the same charge regardless of use or volume
- **No base rate.** This rate structure would mean all customers pay based only on actual use.
- **Base rate** for up to a fixed amount of use and **volume rate** for any use over the base. This rate structure is currently in place; however, a request to assess the amount of the base rate vs. the volume rate has been reviewed. The question to be addressed is should the base rate be lowered significantly to positively impact low consumption users and increase the volume rate to continue to encourage customers to curb their water consumption which subsequently reduces wastewater usage.

### **Storm Water Rates**

For 2017-2019 storm water rate setting, staff prepared a cash flow analysis to determine the level of annual revenues necessary to ensure that future resources are available for storm water capital investments as well as sufficient funds for operations and maintenance. Based on the proposed five-year 2017-2019 CIP along with an additional five-year capital infrastructure outlook on storm water system needs, Storm water rates are recommended to increase 2.0% each year. No analysis of the storm water rate structure – base only – was part of staff's review (See Attachment F). The table below is the historical storm water rates charged since 2005:

## **DISCUSSION ITEM 2**

<b>Historical Storm Rates</b>		
<b>Year</b>	<b>Base</b>	<b>% Chg in Base</b>
2005	\$ 3.25	
2006	\$ 7.25	123%
2007	\$ 14.50	100%
2008	\$ 15.88	10%
2009	\$ 17.40	10%
2010	\$ 19.04	9%
2011	\$ 20.62	8%
2012	\$ 22.32	8%
2013	\$ 23.44	5%
2014	\$ 25.10	7%
2015	\$ 26.88	7%
2016	\$ 28.78	7%
2017	\$ 29.36	2%
2018	\$ 29.94	2%
2019	\$ 30.54	2%
	<b>Overall</b>	<b>300%</b>

Below is a comparison of utility rates and charges for neighboring communities. The rates that other communities charge for water, wastewater and storm water are often not easy to compare as communities base utility rates on unique operations and maintenance required for the utility systems in place along with unique capital infrastructure investments necessary to maintain those utility systems. The comparison uses a consumption scenario to make a comparison of rates:

<b>City</b>	<b>Water Base Rate</b>	<b>Water Excess</b>	<b>Sewer Base</b>	<b>Sewer Excess</b>	<b>Stormwtr</b>	<b>Total Bill Before Taxes</b>	<b>Total Bill + Taxes</b>	<b>Included In Base</b>	<b>Excess Wtr. Rate /100 CF</b>	<b>Excess Swr. Rate/100CF</b>
Snohomish	\$24.84	\$18.32	\$69.99	\$23.60	\$14.39	\$151.14	\$159.20	200 CF	\$4.58	\$5.90
Lake Stevens	\$22.57	\$20.76	\$83.00	\$0.00	\$8.67	\$135.00	\$135.00	0	\$3.46	N/A
Sultan	\$37.61	\$0.00	\$74.47	-	\$9.53	\$121.61	\$128.09	600 CF	\$0.00	N/A
Monroe	\$17.73	\$0.00	\$94.51	\$0.00	\$10.92	\$123.16	\$129.72	400 CF	\$5.05	\$0.00
Granite Falls	\$34.00	\$3.26	\$63.00	-	\$10.00	\$110.26	\$110.26	500 CF	\$3.26	N/A
Arlington	\$32.15	\$8.82	\$70.15	\$0.00	\$6.89	\$118.01	\$124.30	300 CF	\$2.94	N/A
Stanwood	\$24.37	\$0.00	\$39.79	\$0.00	\$12.25	\$76.41	\$80.48	600 CF	\$3.18	N/A
Marysville	\$11.11	\$13.16	\$41.42	\$0.00	\$11.26	\$76.95	\$76.95	400 CF	\$1.20	N/A

### **2016 Residential Bi-Monthly Sewer Rate Comparison**

Comparison is based on a single family residence using 13 units(9,724 gal) sewer bi-monthly

<b>City</b>	<b>Water Base</b>	<b>Water Excess</b>	<b>Total Water</b>	<b>Sewer Base</b>	<b>Sewer Excess</b>	<b>Total Sewer</b>	<b>Storm Water</b>	<b>Total w/Tax</b>	<b>Water Units in Base</b>	<b>Sewer Units in Base</b>	<b>Water Excess Rate</b>	<b>Sewer Excess Rate</b>	<b>Utility Tax Rates</b>
Snohomish	\$ 49.68	\$36.00	\$85.68	\$139.98	\$53.10	\$193.08	\$28.78	\$322.40	4	4	\$ 4.58	\$5.90	5.33% water, sewer, garbage
Lake Stevens	\$ 45.14	\$90.12	\$135.26	\$166.00	-	\$166.00	\$17.34	\$318.60	0	Flat Rate	\$ 3.46	-	0% No utility tax.
Granite Falls	\$ 68.00	\$30.00	\$98.00	\$126.00	-	\$126.00	\$20.00	\$300.00	10	Flat Rate	\$ 3.26	-	25% sewer and water
Monroe	\$ 35.46	\$40.00	\$75.46	\$189.02	-	\$189.02	\$21.84	\$312.77	8	Flat Rate	\$ 5.05	-	10% utility tax on water only
Arlington	\$ 64.30	\$42.00	\$106.30	\$140.30	-	\$140.30	\$13.78	\$272.71	6	Flat Rate	\$ -	\$2.94	5% sewer and water
Sultan	\$ 72.32	\$12.00	\$84.32	\$148.94	-	\$148.94	\$19.06	\$266.32	12	Flat Rate	\$ 3.28	-	6% sewer and water
Marysville	\$ 22.22	\$76.56	\$98.78	\$82.83	-	\$82.83	\$22.52	\$204.13	0	Flat Rate	\$ 4.18	-	0% No utility tax.
Stanwood	\$ 48.74	\$12.00	\$60.74	\$79.58	\$5.55	\$85.13	\$24.50	\$179.12	12	12	\$ 3.18	\$5.55	6% Separate water tax 11%
Everett	\$ 42.48	\$30.00	\$72.48	\$59.87	-	\$59.87	\$0.00	\$132.35	10	Flat Rate	\$ 4.25	-	0% No utility tax.

## **DISCUSSION ITEM 2**

**STRATEGIC PLAN REFERENCE:** *“High quality and sustainable city services”*


**RECOMMENDATION:** That the City Council **DISCUSS** water, wastewater and storm water rates and **DIRECT** staff regarding preparation of a utility rate resolution intended to set utility rates for 2017-2019.

**ATTACHMENTS:**

- A. 2016 Utility Rates
- B. FCS 2016 Water Rate Study
- C. March 2016 Wastewater Workshop
- D. Councilmember Hamilton Analysis of Wastewater Rates
- E. Example of Analysis Tool for Wastewater Rates
- F. Storm water Cash-flow Analysis and Proposed Rates

## DISCUSSION ITEM 2

### ATTACHMENT A

	2016 City Of Snohomish Utility Rate Sheet					
	116 Union Ave, Snohomish, WA 98290 (360) 568-3115					
	Bi-Monthly Water Rates				Bi-Monthly Solid Waste and Recycling Rates	
2015		2016		Residential Services - Solid Waste		
Included Units	Rate	Included Units	Rate	Service Type	Rates until 3-31-16	
Meter Size				PU = Pick-Up		
5/8"	4 \$47.32	4 \$49.68	1 32-Gal Can Monthly PU	\$22.19		
5/8" Low Income Senior	8 \$11.84	8 \$12.44	1 20-Gal Mini Can Weekly PU	\$24.83		
1"	10 \$121.10	10 \$127.16	1 32-Gal Can Weekly PU	\$30.49		
1 1/2"	23 \$272.60	23 \$286.24	1 32-Gal Tote Weekly PU	\$35.34		
2"	41 \$484.58	41 \$508.80	1 64-Gal Tote Weekly PU	\$53.86		
3"	92 \$1,090.16	92 \$1,144.66	2 64-Gal Tote Weekly PU	\$77.22		
4"	164 \$1,937.96	164 \$2,034.86	1 90-Gal Tote Weekly PU	\$75.76		
Non-Metered	\$113.04	\$118.70	2 32-Gal Cans Weekly PU	\$43.93		
Consumption over the included units "Overage"		\$4.36	\$4.58	3 32-Gal Cans Weekly PU	\$57.26	
Service Rate Outside City Limits at 150%				4 32-Gal Cans Weekly PU	\$66.49	
Bi-Monthly Wastewater (Sewer) Rates						
2015		2016		5 32-Gal Cans Weekly PU		
Included Units	Rate	Included Units	Rate	6 32-Gal Cans Weekly PU	\$93.42	
Meter Size				Garbage Extras		
5/8"	4 \$139.98	4 \$139.98		Each Additional Can	\$13.43	
5/8" Low Income Senior	8 \$35.00	8 \$35.00		Each Return Trip	\$12.13	
1"	10 \$358.36	10 \$358.36		Residential Services - Low Income Seniors		
1 1/2"	23 \$806.16	23 \$806.16		1 32-Gal Can Monthly PU	\$11.11	
2"	41 \$1,433.40	41 \$1,433.40		1 20-Gal Mini Can Weekly PU	\$12.42	
3"	92 \$3,224.98	92 \$3,224.98		1 32-Gal Can Weekly PU	\$15.25	
4"	164 \$5,733.22	164 \$5,733.22		2 32-Gal Cans Weekly PU	\$21.96	
Consumption over the included units "Overage"		\$5.90	\$5.90	Garbage Extras		
Service Rate Outside City Limits at 150%					\$3.32	
Bi-Monthly Storm Drainage Rates				Residential Services - Recycling		
Service	Method	2015	2016	Co-Mingled Recycling		
Single Family	ERU	\$26.88	\$28.78	& Yard Waste	\$33.91	
Low Income Senior	ERU	\$6.72	\$7.19	Multi-Family Recycling		
Other Developed Property	ISU	\$26.88	\$28.78	Extra Yard Waste	\$13.66	
*ERU = Equivalent Residential Unit = flat fee				Commercial and Multifamily - Solid Waste		
*ISU = Impervious Surface Unit = rate multiplied by impervious surface units				1 32-Gal Can Weekly PU		
				\$37.95		
ISU is determined by dividing total impervious square footage by 2,500 and multiplying that number (rounded) by the rate.				2 32-Gal Cans Weekly PU		
				\$77.51		
New Water, Sewer, Storm Rates are Effective January 1, 2016.				3 32-Gal Cans Weekly PU		
				\$116.95		
Garbage, Recycle, Yard Waste Rates are Effective Until March 31, 2016.				4 32-Gal Cans Weekly PU		
				\$156.32		
For more information: www.SnohomishWA.gov				5 32-Gal Cans Weekly PU		
				\$195.76		
				1 64 Gal Tote Weekly PU		
				\$73.16		
				1 96 Gal Tote Weekly PU		
				\$120.72		
				1 Yard Dumpster		
				\$186.57		
				1 1.25 Yard Dumpster		
				\$211.27		
				1 1.5 Yard Dumpster		
				\$255.32		
				1 2 Yard Dumpster		
				\$312.32		
				1 3 Yard Dumpster		
				\$417.64		
				1 4 Yard Dumpster		
				\$502.61		
				1 6 Yard Dumpster		
				\$659.49		
				1 8 Yard Dumpster		
				\$816.39		
				1 4 Yard Compactor		
				\$1,578.31		
				Extras		
				\$2.89		

ATTACHMENT B



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## **NOTICE OF SPECIAL MEETING**

### **SNOHOMISH CITY COUNCIL**

in the  
George Gilbertson Boardroom  
1601 Avenue D

**TUESDAY  
May 3, 2016  
5:30 p.m.**

## **WORKSHOP AGENDA**

- 5:30 1. **CALL TO ORDER**
- 2. **EXECUTIVE SESSION – Potential Litigation**
- 6:00 3. **DISCUSSION ITEM – Water Supply (*P.1*)**
- 6:55 4. **ADJOURN**

## **DISCUSSION ITEM 2**

### **DISCUSSION ITEM 3**

**Date:** May 3, 2016  
**To:** City Council  
**From:** Steve Schuller, Deputy City Manager/Public Works Director  
**Subject:** **Council Workshop – 2017 to 2019 Water Utility Rate Update**

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The purpose of tonight's workshop is for the City Council to provide direction regarding the setting of water rates for the next three-year period (2017, 2018 and 2019). In order to set rates for three years, a decision will be required between the two water supply scenarios deliberated at several Council workshops and meetings over the last couple of years.

The workshop will also be a time for the Council to discuss the two scenarios' impacts on long-term water rate projections (2017 to 2031). This has been an ongoing focus of consideration since the City retained Murray, Smith & Associates (MSA) approximately eight years ago to conduct a study of the City's existing sources of water supply, and completed the *Water Treatment Plant and Water Supply Study* in May 2009 (*2009 Study*). On September 15, 2015, the Council approved the next step in assessing the City's current water supply status by authorizing a water rate study by FCS Group to analyze the short and long-term costs of the two water supply scenarios:

Scenario 1: (Keep Two Sources of Supply): City continues to maintain two sources of supply (City water treatment plant and transmission line, and Everett supply); and

Scenario 2: (All Everett for City Supply): City served by one source of supply (Everett), and establishes alternative source of supply for transmission line customers.

#### **ANSWERS TO TWO KEY QUESTIONS BY THE CITY COUNCIL FROM PREVIOUS MEETINGS IN 2014 AND 2015:**

1. *Which scenario is the preferred option (that is, the least cost) for City rate payers, both in the short term (2017 to 2019) and in the long-term (2017 to 2031)?*

**Scenario 2 (All Everett) has significantly lower water rate projections for both the short and long-term:** By 2019, water rates under Scenario 2 are projected to be about 12% lower than Scenario 1 (Keeping Two Supply Sources). By 2031, water rates under Scenario 2 are projected to be a substantial 48% lower than (that is, almost half the cost of) Scenario 1. See the rate projection summary below and in Attachment A.

2. *If we shut down our water treatment plant and discontinue our diversion of water from the Pilchuck River, how do we protect our water right to either sell or re-use in the future?*

**Banking our perfected water right with the State is the preferred option:** The water right has a restricted value today because State law only allows us to sell it to another

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### **DISCUSSION ITEM 3**

party for use within the same watershed. The two major users of water within our watershed are the City of Everett and Snohomish PUD. Both agencies have stated over numerous meetings that they do not have an extensive financial interest in our water right either now or in the foreseeable future.

In the distant future, there is an unknown possibility that the State may allow water rights to be exchanged across boundaries. If the City were able to sell their water right to a public or private party in Eastern Washington or potentially to a party in California or another state, this could increase the value of the water right appreciably. Both the reality that the water right has restricted value today and the fact that it has unknown value in the distance future reinforces that water right banking is the preferred option.

By banking the water right the City would also have the option to return to providing its own water supply in the distant future. Under current known conditions it appears this would be a challenging choice given the cost and timeframe to permit and construct a new intake and treatment system, but technological advancements could make this a competitive choice in the future. Banking the water right would allow the City to preserve those perfected rights into the future as would be established in a detailed agreement between the State Department of Ecology and the City. In previous workshops and meetings in 2014 and 2015, additional details about the “perfected” water right have been discussed. Staff will be available at tonight’s workshop to discuss any additional questions or concerns.

**BACKGROUND:** The water utility is the third most expensive service provided by the City, preceded by wastewater and law enforcement. Approximately one out of every seven dollars (or 14%) of the City’s annual operating expenses is for the water utility. The City of Snohomish currently serves the northern half of the City with water purchased from the City of Everett and supplied from Everett’s No. 5 water transmission line which runs through the City of Snohomish north of Blackmans Lake. Everett’s sources of supply are the Spada and Chaplain Reservoirs, which supply water to the majority of Snohomish County (more than 600,000 residents). Most of the southern half of the City of Snohomish is supplied by the City’s own WTP constructed in 1981. The nearby diversion dam and water intake structure were constructed in 1932 on the Pilchuck River. The plant and dam are located several miles northeast of the City, just north of Lake Roesiger. Site visits to both the dam and intake structure, and the WTP are available upon request. The water is supplied by a 14.6-mile underground water transmission line that sends the flow to two City reservoirs located near Emerson Elementary school at the intersection of Pine Avenue and 13<sup>th</sup> Street.

In 2014, the City Council conducted two workshops, in March and November, to discuss in detail the option of shutting down the City’s existing 1981 WTP and pursuing the “*Everett Supply for the Entire City System*” alternative described in the *2009 Water Treatment Plant and Water Supply Study*. At the November workshop, the City Council directed staff to pursue this alternative, and bring a resolution back to the Council which would direct the City to investigate other sources of water supply, specially the All-Everett scenario.

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### **DISCUSSION ITEM 3**

On August 4, 2015 the City Council passed Resolution 1331 regarding the City's sources of water supply, and directed staff to proceed forward with next steps, which is a water rate study based on the two water supply scenarios. Tonight's workshop will review the results on the draft study.

**SUMMARY OF RATE PROJECTIONS:** Below is a summary of the rate impacts of the two scenarios based on the recent FCS Group study. This is the monthly average residential water bill for City customers. The rate projections were extended to the year 2031, which is when both the City's water treatment plant and the 14.6 mile long transmission line would be approximately 50 years old and near the end of their service life. For a year-by-year comparison and further detail see the spreadsheet in Attachment A.

Scenario 2, in which the City customers are served by one source of supply from the City of Everett is significantly more cost effective. Based on the estimated projections in the rate study, the rate in 6 years (in 2022) would increase by 47.98% in Scenario 1 versus 14.28% in Scenario 2. In 15 years (in 2031) the rate would increase by 166.39% in Scenario 1 versus 39.28% in Scenario 2. The difference in projected rates between the two scenarios is almost **double** (\$109.49/month vs. \$57.24/month) by 2031. See the table below:

*Monthly Average Residential Water Bill Comparison for City  
("Non-Transmission Line") Customers:*

	2016	2017	2019	2022	2031
<b>Scenario 1 - Keep Two Sources</b>					
Residential Bill ( <i>Monthly</i> )	\$41.10	\$43.87	\$50.00	\$60.82	\$109.49
Cumulative Rate Increase		6.75%	21.65%	47.98%	166.39%
<b>Scenario 2 - All Everett</b>					
Residential Bill ( <i>Monthly</i> )	\$41.10	42.02	\$43.94	\$46.97	\$57.24
Cumulative Rate Increase		2.25%	6.90%	14.28%	39.28%

**ADDITIONAL COSTS TO MAINTAIN BOTH SUPPLIES SIGNIFICANT IN PAST YEARS:** Keeping the City source of water supply and WTP has already cost the City considerably more in the last several years than if the City was purchasing water only from Everett. Over a five year period (2008 to 2012) the City spent \$3.41 million on water supply and treatment. The same amount of water could have been purchased from the City of Everett for \$476,000 over that identical five year period. To put this amount in perspective, the City could have provided free water to all customers, both residential and business, for 1.5 years during this

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period, if the City did not have to supply its own water. The cost of City supplied water was over seven times more than water supplied from Everett. Even if all City capital costs over this five year period are not included in the totals, the cost of City supplied water was still three times more than Everett's. See Figure 1 below:

*Figure 1: Five Year (2008 to 2012) Total Operation and Capital Cost Comparison between Everett Purchased and Water Produced from the WTP*



Since 2008, the City has made a number of key capital improvements and enhancements in the operation of the WTP. This has brought the unit cost of water at the WTP down significantly from over \$4.00 per CCF (CCF=100 Cubic Feet) to approximately \$2.00 per CCF in 2013. These unit costs are for operational expenses only and do not include capital costs.

This last year (2015), the operational expenses for the City's water treatment plant were about \$292,000. This only includes costs for the two personnel, chemicals, basic repairs and utilities to run the plant. This amount does not include capital costs or debt from previous capital upgrades. Any capital costs required would be in addition to the \$292,000. The cost to purchase the same amount of water from Everett in 2015 was approximately \$170,000. Everett's charge includes

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both operational expenses and funding for future capital improvements. The total 2015 expenses for the City's water fund were \$2.47 million. If the City could have instantly switched to Everett, the savings in 2015 would have been about \$122,000 or about 5% of the total water expenses.

Both the WTP and the 14.6 mile transmission line were built in the early 1980's. They are going to face additional capital improvement needs in the coming years that will drive costs up considerably.

**CAPITAL IMPROVEMENT PLAN (CIP) ASSUMPTIONS:** The FCS Group rate study assumed the following capital costs for the WTP and the transmission line under Scenario 1:

- \$100,000 per year average WTP capital costs (2015 dollars);
- \$50,000 per year average transmission line repair costs (2015 dollars);
- \$1.1 Million for major WTP Upgrade in the year 2019 (2015 dollars);
- \$18 Million Replacement (*in 2008 dollars*) of the transmission line in 2031 after 50 years in service. Scenario 1 assumes 30% cash and 70% debt issuance in 2031.

The CIP assumption assumes no other major upgrades at the WTP is needed between 2019 and 2031. If additional upgrades were needed to replace aging systems or to respond to new regulations, then the projected rate increases for Scenario 1 (currently about 6.75% each year) would be higher. The transmission line may last longer than the currently projected 50 years service life. This could allow the City to reduce rate increases and issue less debt for the years beyond 2031.

**EVERETT RATE ASSUMPTIONS:** The City of Everett's Council approved their most recent Water Comprehensive Plan update in 2015. From their plan, "The 2014 Amendment to the 2007 Water Comprehensive Plan was approved by the State of Washington Department of Health on April 9, 2015. This amendment will remain in effect until April 9, 2021." The approved plan identified a 0% rate increase for 2017, and 3% increases for 2018, 2019 and 2020 for the cost of wholesale water purchases. Based on a review of their 15-year operational and capital cost projections, a 3% per year rate increase amount was also used in the FCS Group study for the years 2021 to 2031.

**CLIMATE CHANGE AND DROUGHT:** In the year 2031 and beyond, would it be better for the City to pay nearly double the water rates in 2031 in order to keep a secondary source of water supply? At the workshop, staff will provide their perspective, but the ultimate decision will be the City Council's.

**TRANSMISSION LINE CUSTOMERS:** There are currently about 76 water meters (or about 100 customers) served directly from the 14.6 mile transmission line which runs between the WTP on the upper Pilchuck River and the City of Snohomish. Currently, customers outside the City limits, including the transmission line customers, pay a 50% surcharge in addition to City water rates. Under Scenario 1 or Scenario 2, the study projected that about 21 customers will connect directly to Snohomish PUD (PUD) over the next 6 years. For the draft FSC Group rate

**City Council Workshop  
May 3, 2016**

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## **DISCUSSION ITEM 2**

### **DISCUSSION ITEM 3**

study, we assumed that the City would pay up to \$10,000 per each parcel to reimburse “lower” transmission line customers (those between Machias Elementary School and the City) to connect to nearby PUD mains. This would allow the City to abandon about 60% of the transmission line in the future. Once the City’s WTP is shutdown, the City can continue to provide the “upper” transmission line customers (about 55 meters) with PUD water purchased wholesale. The City already has a supply connection with PUD near the WTP.

See Attachment A for details regarding short-term and long-term rate projections for both scenarios for the transmission line customers. Over a decade from now (2025 and beyond), Scenario 2 starts to cost more than 50% more than Scenario 1. This is because it is hard to predict how many upper transmission line customers will want to stay on the line and pay to upgrade and repair an older transmission system serving customers spread out over several miles. Staff believes that future private development will extend the Snohomish PUD system into this area and that many of our existing transmission line customers will connect to PUD or pursue other options such as individual or group groundwater wells. The FCS Group projection shown in Scenario 2 of Attachment A assumes that all these customers will want to upgrade the existing City transmission line in 2031 at an estimated cost of two million dollars. Staff believes this is unlikely but wanted to show this “worst case.”

**TONIGHT’S COUNCIL DIRECTION:** Over the last couple of years, the City of Snohomish has been putting off as many capital upgrades at the WTP as possible while the two scenarios were discussed and studied. In order to continue meeting stringent public health regulations, the City should not continue to postpone improvements. In order to set rates for 2017, 2018 and 2019, and to plan for capital and operation upgrades over the next 10-years, the City Council has two key options to choose from tonight:

- 1) **Direct Staff to Implement Scenario 1 (Keep Both Sources of Supply):** Staff would bring back a rate resolution later in the year to raise rates 6.75% each year over the next three years (2017, 2018 and 2019). Average water rates would go from \$41.10 in 2016 to \$50.00 in 2019 (**for a cumulative increase of 21.65%**).
- 2) **Direct Staff to Continue to Implement Scenario 2 (All Everett for City Supply):** Staff would bring back a rate resolution later in the year to raise rates 2.25% each year over the next three years (2017, 2018 and 2019). Average water rates would go from \$41.10 in 2016 to \$43.94 in 2019 (**for a cumulative increase of 6.90%**).

**NEXT STEPS UNDER SCENARIO 2:** The water treatment plant would not be shut down and the City would keep both sources of supply until the following were completed and approved to the satisfaction of the City Council:

- 1) **Meeting with Transmission Line Customers:** A notice and separate meeting with transmission line customers would be held in order to review the details of the proposed plan and provide follow-up by city staff. An agenda item would be placed on a future City Council meeting for the Council to hear from the public and all current water customers, including the transmission line customers.

## **DISCUSSION ITEM 2**

### **DISCUSSION ITEM 3**

- 2) **Planning for Removal of the Existing Dam and Intake Structure on the Pilchuck River:** City staff would work with the Tribes, Washington Water Trust, State agencies and others on a Memorandum of Understanding regarding financial grants, payments or reimbursements to the City, and schedule for removal of the existing dam and intake structure.
- 3) **Water Right Banking Agreement:** Staff would work with the Department of Ecology, our City Attorney's office and specialized Legal Counsel on a draft Water Right's banking agreement for Council review.
- 4) **Snohomish PUD Water Supply Agreement:** Staff would work with the PUD on a wholesale supply agreement for supplying water to the transmission line customers and future conversion of some of the parcels to the PUD for direct service.

The City would continue to operate the WTP with a tentatively planned date of 2018 or later to close down its operations only and if only the Council approved each of the items above. The City would not shutdown operations of the plant without Council's specific authorization and with a goal of providing a minimum of 6-months notice to staff, the public and other agencies.

**STRATEGIC PLAN REFERENCE:** Not applicable

**RECOMMENDATION:** That the City Council **DISCUSS** the water utility rate update and provide **DIRECTION** on the setting of 2017 to 2019 water rates by selecting one of the options below:

- 1) Council **DIRECTS** staff to implement Scenario 1, keeping both sources of water supply, and to bring a rate resolution for Council approval later in the year to raise rates 6.75% each year over the next three years (2017, 2018 and 2019) for a cumulative rate increase of 21.65%.

**OR**

- 2) Council **DIRECTS** staff to continue to implement Scenario 2, using Everett for all the City's water supply, and to bring a rate resolution for Council approval later in the year to raise rates 2.25% each year over the next three years (2017, 2018 and 2019) for a cumulative increase of 6.90%.

**ATTACHMENT:** Scenario Summaries and Residential Bill Comparison Spreadsheet

## DISCUSSION ITEM 3

Attachment A  
Scenario Summaries and Residential Bill Comparison (March 2016)

**Scenario 1:**  
-Continue two sources of supply  
-All transmission customers stay on transmission line  
-Transmission line fully replaced in 2031  
-All customers bare costs equally

**Scenario 2:**  
-Transmission customers served by wholesale PUD water purchased (21 customers connect directly to PUD in 2023)  
-Remainder of customers served by Everett water purchased  
-Treatment costs cease in 2016  
-Lower portion of Transmission line is re-lined in 2031 for \$2M (escalated at 1.50%)  
-Transmission customers bare all costs associated with them

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Rate Increase Non-Transmission Line Customers		6.75%	6.75%	6.75%	6.75%	6.75%	6.75%	6.75%	6.75%	6.75%	6.75%	6.75%	6.75%	6.75%	6.75%	6.75%
Cumulative Rate Increase Non-Transmission Line		6.75%	13.96%	21.65%	29.86%	38.62%	47.98%	57.97%	68.63%	80.02%	92.17%	105.14%	118.99%	133.77%	149.55%	168.39%
Non-Transmission Residential Bill (5/8" Meter, 6 ccf)	\$ 41.10	\$ 43.87	\$ 46.84	\$ 50.00	\$ 53.37	\$ 56.97	\$ 60.82	\$ 64.93	\$ 69.31	\$ 73.99	\$ 78.98	\$ 84.31	\$ 90.00	\$ 96.08	\$ 102.56	\$ 109.49
Monthly Average Increase		\$ 2.77	\$ 2.96	\$ 3.16	\$ 3.37	\$ 3.60	\$ 3.85	\$ 4.11	\$ 4.38	\$ 4.68	\$ 4.99	\$ 5.33	\$ 5.69	\$ 6.08	\$ 6.49	\$ 6.92
Rate Increase Transmission Line Customers		6.75%	6.75%	6.75%	6.75%	6.75%	6.75%	6.75%	6.75%	6.75%	6.75%	6.75%	6.75%	6.75%	6.75%	6.75%
Cumulative Rate Increase Transmission Line		6.75%	13.96%	21.65%	29.86%	38.62%	47.98%	57.97%	68.63%	80.02%	92.17%	105.14%	118.99%	133.77%	149.55%	168.39%
Transmission Residential Bill (5/8" Meter, 6 ccf)	\$ 61.65	\$ 65.81	\$ 70.25	\$ 75.00	\$ 80.06	\$ 85.46	\$ 91.23	\$ 97.39	\$ 103.96	\$ 110.98	\$ 118.47	\$ 126.47	\$ 135.00	\$ 144.12	\$ 153.85	\$ 164.23
Monthly Average Increase		\$ 4.16	\$ 4.44	\$ 4.74	\$ 5.06	\$ 5.40	\$ 5.77	\$ 6.16	\$ 6.57	\$ 7.02	\$ 7.49	\$ 8.00	\$ 8.54	\$ 9.11	\$ 9.73	\$ 10.38

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Rate Increase Non-Transmission Line Customers		2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.25%	2.00%
Cumulative Rate Increase Non-Transmission Line		2.25%	4.52%	6.90%	9.31%	11.77%	14.28%	16.85%	19.48%	22.17%	24.92%	27.73%	30.60%	33.54%	36.55%	39.26%
Non-Transmission Residential Bill (5/8" Meter, 6 ccf)	\$ 41.10	\$ 42.02	\$ 42.97	\$ 43.94	\$ 44.93	\$ 45.94	\$ 46.97	\$ 48.03	\$ 49.11	\$ 50.21	\$ 51.34	\$ 52.50	\$ 53.68	\$ 54.88	\$ 56.12	\$ 57.24
Monthly Average Increase		\$ 0.92	\$ 0.95	\$ 0.97	\$ 0.99	\$ 1.01	\$ 1.03	\$ 1.06	\$ 1.08	\$ 1.10	\$ 1.13	\$ 1.16	\$ 1.18	\$ 1.21	\$ 1.23	\$ 1.12
Rate Increase Transmission Line Customers		6.75%	8.25%	9.75%	11.25%	12.75%	13.50%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%	14.00%
Cumulative Rate Increase Transmission Line		6.75%	15.06%	25.62%	41.09%	58.08%	68.56%	103.63%	134.65%	167.50%	204.95%	247.65%	295.32%	351.60%	415.05%	487.15%
Transmission Residential Bill (5/8" Meter, 6 ccf)	\$ 61.65	\$ 65.81	\$ 71.24	\$ 78.19	\$ 86.98	\$ 96.07	\$ 111.31	\$ 128.90	\$ 144.66	\$ 164.92	\$ 188.00	\$ 214.32	\$ 244.33	\$ 278.54	\$ 317.53	\$ 361.98
Monthly Average Increase		\$ 4.16	\$ 5.43	\$ 6.95	\$ 8.80	\$ 11.09	\$ 13.24	\$ 15.59	\$ 17.77	\$ 20.25	\$ 23.09	\$ 26.32	\$ 30.01	\$ 34.21	\$ 38.99	\$ 44.45



ATTACHMENT C



# CITY OF SNOHOMISH

*Founded 1859, Incorporated 1890*

116 UNION AVENUE ■ SNOHOMISH, WASHINGTON 98290 ■ TEL (360) 568-3115 FAX (360) 568-1375

## NOTICE OF SPECIAL MEETING

### SNOHOMISH CITY COUNCIL

in the  
George Gilbertson Boardroom  
1601 Avenue D

TUESDAY  
March 1, 2016  
6:00 p.m.

## WORKSHOP AGENDA

- 6:00 1. CALL TO ORDER
2. DISCUSSION ITEM – Wastewater Utility System & Rate Analysis Update  
(P.1)
- 6:55 3. ADJOURN

## **DISCUSSION ITEM 2**

### **DISCUSSION ITEM 2**

**Date:** March 1, 2016  
**To:** City Council  
**From:** Steve Schuller, Public Works Director  
**Subject:** **Council Workshop – 2017 to 2019 Wastewater Utility Rate Update**

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The workshop presentation will provide an update on the City's wastewater utility with a focus on four areas:

- 1) Environmental Compliance Improvements;
- 2) 10-year Capital Improvement Plan (CIP);
- 3) Wastewater Rate Options for 2017, 2018 and 2019; and
- 4) Next Steps, including Public Outreach and future Rate Resolution.

Our City's Wastewater Treatment Plant (WWTP) had a perfect year in 2015 with zero permit exceedences! This is the first time this has happened for our City in over 20 years. The Washington State Department of Ecology's online records go back to 1995, the same year our City's current plant configuration was built.

Over a four year period (2006 to 2009), the WWTP had 109 permit exceedences. In contrast, over the last four years (2012 to 2015), since the City installed innovative submerged fixed film (or "Bacteria Hotels") in 2012, the WWTP had only 3 permit exceedences. The innovative fixed film technology, never before used in Washington State, has made an amazing difference.

The City will continue to pursue performance improvements to outperform today's strict and demanding permit limits. These limits are set by federal (Environmental Protection Agency) and state (Department of Ecology) regulatory agencies, and the City is required by law to comply. Environmental regulations have grown significantly in the last decades and have consistently become more stringent in order to reduce pollution into our waterways.

At the workshop we will discuss in more detail our environmental compliance progress and how this continued advancement provides positive options for future wastewater rates, in particular as Council prepares to set utility rates for 2017, 2018 and 2019 in the coming year. The City Council will consider several options at the workshop for setting these rates. The next several years are critical if we want to continue the regulatory achievements and the associated long-term benefits it can provide to our ratepayers.

Based on our progress in recent years, the City Council was able to cancel a proposed 90% increase in wastewater rates which would have been required in order to send our wastewater to the City of Everett for treatment. In early 2014, the Washington State Department of Ecology Agreed Order requiring the City to send its waste to Everett was amended. Over the next year, the City met all the stringent conditions of the amended Agreed Order, and received a "Notice of Compliance" on March 10, 2015. This allowed the City to continue treating its wastewater at the

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March 1, 2016***

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## **DISCUSSION ITEM 2**

### **DISCUSSION ITEM 2**

current plant, and the City is no longer required to send its wastewater to Everett. Based on that successful advancement, the Council was able to adopt a 0% (zero) increase in wastewater rates for 2014, 2015 and again in 2016; allowing no change in the rate for 3 years.

Wastewater is one of the most expensive services provided by the City. Approximately one out of every four dollars of the City's annual operating expenses is for the wastewater utility. The presentation will compare our past, current and potential future wastewater rates with some of our neighboring jurisdictions including the City of Monroe, Lake Stevens Sewer District and the City of Everett. In 2013, the City of Snohomish's rate (based on average consumption) was the highest of the four. By keeping our wastewater rate flat, in just two years, the City of Snohomish wastewater rate in 2015 was cheaper than Monroe's. With continued improvements, we are on the heels of our other neighbors. More specifics on current and future rate comparisons will be reviewed at the workshop.

Over the next ten years, the City is planning to invest approximately \$16 million in capital improvements to the wastewater system. One of the more expensive projects is the Combined Sewer Overflow (CSO) separations. Currently, in the historic portion of the City, there is only one pipe in the street that conveys both sanitary sewer (from inside homes and businesses) and stormwater (from street catch basins) to the wastewater treatment plant. In December 2015, due to heavy rains, the wastewater treatment plant almost reached its design influent flow capacity of 2.8 Million Gallons per Day (monthly average). In perspective, this last December was the eighth wettest month on record. The City's long-term plan is to separate a portion of the storm flows from the wastewater plant, and convey them directly to the 25-acre storm lagoon (*a.k.a. the Riverview Wildlife Refuge*) for wetland treatment. The presentation will also provide an update on our progress to date on this project.

Four rate options will be detailed for review at the workshop:

- 1) **Increase rates by the cost of inflation (about 2%) each year.** This would calculate to 2% in 2017, 2% in 2018 and 2% in 2019. This will leave the City with an estimated ending fund balance amount reserved for capital of \$8,069,202 at the end of 2019, and available for future wastewater capital infrastructure improvements. Because of an approximate \$2 million WWTP filtration upgrade project planned for 2020, the ending fund balance amount reserved for capital drops to \$6,240,940 at the end of 2020.
- 2) **Keep rate increases at 0% (zero).** This would reflect 0% in 2017, 0% in 2018 and 0% in 2019. This is the recommendation of the *FCS Group* rate study and City Council workshop conducted in January 2014. This will leave the City with an estimated ending fund balance amount reserved for capital of \$7,804,502 at the end of 2019, and available for future wastewater capital infrastructure improvements. Because of the planned filtration project, the ending fund balance amount reserved for capital drops to \$5,887,972 at the end of 2020.
- 3) **Rate Reduction of 5% in 2017.** This calculation would be -5% in 2017 (*5% reduction in rates*), 0% in 2018 and 0% in 2019. This will leave the City with an estimated ending fund balance amount reserved for capital of \$7,142,754 at the end of 2019, and available



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### **DISCUSSION ITEM 2**

for future wastewater capital infrastructure improvements. Because of the planned filtration project, the ending fund balance amount reserved for capital drops to \$5,005,641 at the end of 2020.

- 4) **Rate Reduction of 10% in 2017.** This would be -10% in 2017 (10% *reduction in rates*), 0% in 2018 and 0% in 2019. This will leave the City with an estimated ending fund balance amount reserved for capital of \$6,481,006 at the end of 2019, and available for future wastewater capital infrastructure improvements. Because of the planned filtration project, the ending fund balance amount reserved for capital drops to \$4,123,310 at the end of 2020.

The Washington State Public Works Trust Fund (PWTF) loan program has been gutted in recent legislative sessions. This has been a key source of capital funding for the City. We currently have five outstanding PWTF loans for the wastewater system that allowed us to build three key capital improvements: 1) The 2007 Trunkline that connects Snohomish Station, Bickford Ford and many others to the north; 2) The 2011 CSO Improvements; and 3) The 2012 “Bacteria Hotels.” The interest rate over the last decade has been very low (0.5%). Without this source of loan funding, the City’s available funds for future capital upgrades become much more critical.

Below is a summary of our current debt within the wastewater utility:

- Starting in 2017, there is no “bonded” debt;
- Remaining debt obligations as of December 31, 2015 is \$7,944,372 through five remaining PWTF Loans. Principal and interest payments due in 2016 total \$1,028,618:
  - Trunkline (3 loans): Completed in 2007 from the treatment plant to the Snohomish Station/Bickford Ford area;
  - Combined Sewer Overflow (CSO) Project (1 loan): Completed in 2011; and
  - Innovative “Bacteria Hotels” (1 loan): Installed in 2012.
- Starting in 2017, principal and interest payments average \$740,125 until 2023 when the annual debt obligations start to mature and are paid in full. In 2029, all current wastewater debt is scheduled to be paid.

Each of the four rate options provides a balance of risk and reward. With a higher rate, the City will be better positioned to complete the CSO separations, sustain a high level of environmental compliance, response to new regulations (such as FEMA’s levee and floodplain changes or Ecology’s new fish consumption rule, both due later this year), and complete critical capital upgrades. With a lower rate, our ratepayers (both businesses and residences) are able to keep more of their funds in 2017, 2018 and 2019. For 2017, a 10% rate reduction would save the average single family home about \$18.71 every two months or \$112 per year (based on 1200 cubic feet average use, *FSC Group 2014 Rate Study*). A major part of the workshop will be to review the risk vs. reward components of each option.

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## **DISCUSSION ITEM 2**

### **DISCUSSION ITEM 2**

Another key discussion for the workshop will be how to provide citizen outreach, education and full transparency of this complex and challenging subject, and just as important, how to share our good news, regarding both our extensive improvements to our environmental record and the resulting positive impact on current and future rates.

Based on the City Council's direction tonight, staff will prepare a utility rate resolution for Council evaluation and adoption later in the year that would set rates for the next three year period (2017, 2018 and 2019). The future resolution will also include water and stormwater utility rate determinations for the same period. Updates and rate options for those two utilities will be discussed at meetings in the coming months.

**STRATEGIC PLAN REFERENCE:** Not applicable

**RECOMMENDATION:** That the City Council **DISCUSS** the wastewater utility update and provide **DIRECTION** on the preferred 2017 to 2019 wastewater rate option.

**ATTACHMENT:** None

## **DISCUSSION ITEM 2**

### ATTACHMENT D

#### Waste Water Utility Rate Study:

2007: Base rate \$72.30 for 8 units, each additional unit \$3.70

2008: Base rate \$87.74 for 4 units, each additional unit \$3.10

2016: Base rate \$139.98 for 4 units, each additional unit \$5.90

In December 2007 & January 2008 I proposed 2008 rates at:

Base rate \$72.30 for 4 units, each additional unit \$4.25

Rates paid by 5/8 inch meter customers for the following years and percentage change from 2007

Year	8 units	12 units	14 units	16 units	20 units
2007	72.30	87.10	94.50	101.90	116.70
2008	100.14	112.54	118.74	124.94	135.34
%change	38.51%	29.21%	25.65%	22.61%	17.69%
2016	163.59	187.18	198.98	210.78	234.38
%change	126.26%	114.90%	110.56%	106.85%	100.93%

Here's what happens with a straight 10% rate decrease for 2017 as originally proposed: Base rate \$125.98 for 4 units, each additional unit \$5.31

2017	147.22	168.46	179.08	189.70	210.94
	103.62%	93.41%	89.50%	86.16%	80.75%

Rates that I proposed for 2008 as more equitable and using this method an extension to 2016. Rate increase in the ensuing years was used to arrive at a Base Rate of \$116.98 for 4 units, each additional unit \$8.38 for 2016

2008	89.30	106.30	114.80	123.30	140.30
%change	23.51%	23.04%	21.48%	21.00%	20.22%
2016	150.50	184.02	200.78	217.54	251.06
%change	108.15%	111.27%	112.46%	113.48	115.13%

The rate increase in 2011 placed a larger increase on the variable rate. Every other rate increase since 2008 had an equal percentage increase for both the base and variable rates.

While I'm not suggesting a 10% rate decrease to extended rate I calculated for 2016 based on my original proposal, this is what it would look like. Base rate of \$105.28 for 4 units, \$7.54 for each additional unit.

2017	135.44	165.60	180.68	195.76	225.92
	87.33%	90.12%	91.20%	92.11%	93.59%

## DISCUSSION ITEM 2

### ATTACHMENT E

Wastewater Historical Increase/Decrease		# of Units Used:					Average					
5/8" Meter Size		4 Units	5 Units	8 Units	10 Units	12 Units	13 Units	20 Units	25 Units	30 Units		
Base Units to 4	2005	\$ 69.50	\$ 69.50	\$ 69.50	\$ 75.30	\$ 81.10	\$ 84.00	\$ 104.30	\$ 118.80	\$ 133.30		
	2006	\$ 72.30	\$ 72.30	\$ 72.30	\$ 79.70	\$ 87.10	\$ 90.80	\$ 116.70	\$ 135.20	\$ 153.70		
	\$ Amount Change	\$ 2.80	\$ 2.80	\$ 2.80	\$ 4.40	\$ 6.00	\$ 6.80	\$ 12.40	\$ 16.40	\$ 20.40		
	% Amount Change	4%	4%	4%	6%	7%	8%	12%	14%	15%		
	2006	\$ 72.30	\$ 72.30	\$ 72.30	\$ 79.70	\$ 87.10	\$ 90.80	\$ 116.70	\$ 135.20	\$ 153.70		
	2007	\$ 72.30	\$ 72.30	\$ 72.30	\$ 79.70	\$ 87.10	\$ 90.80	\$ 116.70	\$ 135.20	\$ 153.70		
	\$ Amount Change	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
	% Amount Change	0%	0%	0%	0%	0%	0%	0%	0%	0%		
	2007	\$ 72.30	\$ 72.30	\$ 72.30	\$ 79.70	\$ 87.10	\$ 90.80	\$ 116.70	\$ 135.20	\$ 153.70		
	2008	\$ 87.74	\$ 90.84	\$ 100.14	\$ 106.34	\$ 112.54	\$ 115.64	\$ 137.34	\$ 152.84	\$ 168.34		
	\$ Amount Change	\$ 15.44	\$ 18.54	\$ 27.84	\$ 26.64	\$ 25.44	\$ 24.84	\$ 20.64	\$ 17.64	\$ 14.64		
	% Amount Change	21%	26%	39%	33%	29%	27%	18%	13%	10%		
	2008	\$ 87.74	\$ 90.84	\$ 100.14	\$ 106.34	\$ 112.54	\$ 115.64	\$ 137.34	\$ 152.84	\$ 168.34		
	2009	\$ 105.00	\$ 108.91	\$ 120.64	\$ 128.46	\$ 136.28	\$ 140.19	\$ 167.56	\$ 187.11	\$ 206.66		
	\$ Amount Change	\$ 17.26	\$ 18.07	\$ 20.50	\$ 22.12	\$ 23.74	\$ 24.55	\$ 30.22	\$ 34.27	\$ 38.32		
	% Amount Change	20%	20%	20%	21%	21%	21%	22%	22%	23%		
	2009	\$ 105.00	\$ 108.91	\$ 120.64	\$ 128.46	\$ 136.28	\$ 140.19	\$ 167.56	\$ 187.11	\$ 206.66		
	2010	\$ 105.00	\$ 108.91	\$ 120.64	\$ 128.46	\$ 136.28	\$ 140.19	\$ 167.56	\$ 187.11	\$ 206.66		
	\$ Amount Change	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -		
	% Amount Change	0%	0%	0%	0%	0%	0%	0%	0%	0%		
	2010	\$ 105.00	\$ 108.91	\$ 120.64	\$ 128.46	\$ 136.28	\$ 140.19	\$ 167.56	\$ 187.11	\$ 206.66		
	2011	\$ 113.40	\$ 118.18	\$ 132.52	\$ 142.08	\$ 151.64	\$ 156.42	\$ 189.88	\$ 213.78	\$ 237.68		
	\$ Amount Change	\$ 8.40	\$ 9.27	\$ 11.88	\$ 13.62	\$ 15.36	\$ 16.23	\$ 22.32	\$ 26.67	\$ 31.02		
	% Amount Change	8%	9%	10%	11%	11%	12%	13%	14%	15%		
	2011	\$ 113.40	\$ 118.18	\$ 132.52	\$ 142.08	\$ 151.64	\$ 156.42	\$ 189.88	\$ 213.78	\$ 237.68		
	2012	\$ 125.98	\$ 131.29	\$ 147.22	\$ 157.84	\$ 168.46	\$ 173.77	\$ 210.94	\$ 237.49	\$ 264.04		
	\$ Amount Change	\$ 12.58	\$ 13.11	\$ 14.70	\$ 15.76	\$ 16.82	\$ 17.35	\$ 21.06	\$ 23.71	\$ 26.36		
	% Amount Change	11%	11%	11%	11%	11%	11%	11%	11%	11%		
2012	\$ 125.98	\$ 131.29	\$ 147.22	\$ 157.84	\$ 168.46	\$ 173.77	\$ 210.94	\$ 237.49	\$ 264.04			
2013	\$ 139.98	\$ 145.88	\$ 163.58	\$ 175.38	\$ 187.18	\$ 193.08	\$ 234.38	\$ 263.88	\$ 293.38			
\$ Amount Change	\$ 14.00	\$ 14.59	\$ 16.36	\$ 17.54	\$ 18.72	\$ 19.31	\$ 23.44	\$ 26.39	\$ 29.34			
% Amount Change	11%	11%	11%	11%	11%	11%	11%	11%	11%			
2013	\$ 139.98	\$ 145.88	\$ 163.58	\$ 175.38	\$ 187.18	\$ 193.08	\$ 234.38	\$ 263.88	\$ 293.38			
2014	\$ 139.98	\$ 145.88	\$ 163.58	\$ 175.38	\$ 187.18	\$ 193.08	\$ 234.38	\$ 263.88	\$ 293.38			
\$ Amount Change	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
% Amount Change	0%	0%	0%	0%	0%	0%	0%	0%	0%			
2014	\$ 139.98	\$ 145.88	\$ 163.58	\$ 175.38	\$ 187.18	\$ 193.08	\$ 234.38	\$ 263.88	\$ 293.38			
2015	\$ 139.98	\$ 145.88	\$ 163.58	\$ 175.38	\$ 187.18	\$ 193.08	\$ 234.38	\$ 263.88	\$ 293.38			
\$ Amount Change	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
% Amount Change	0%	0%	0%	0%	0%	0%	0%	0%	0%			
2015	\$ 139.98	\$ 145.88	\$ 163.58	\$ 175.38	\$ 187.18	\$ 193.08	\$ 234.38	\$ 263.88	\$ 293.38			
2016	\$ 139.98	\$ 145.88	\$ 163.58	\$ 175.38	\$ 187.18	\$ 193.08	\$ 234.38	\$ 263.88	\$ 293.38			
\$ Amount Change	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
% Amount Change	0%	0%	0%	0%	0%	0%	0%	0%	0%			
Overall Increase/Decrease 2005 to 2016		75%	80%	95%	93%	91%	90%	87%	86%	85%		
	Change from 2007 to 2016	94%	102%	126%	120%	115%	113%	101%	95%	91%		

	Base % Change	Overage % Change
2017 Rate Change	-10%	-10%
2018 Rate Change	0%	0%
2019 Rate Change	0%	0%

		# of Units Used:						Average			
5/8" Meter	Bi-Mo Base	Per Unit Overage	4 Units	5 Units	8 Units	10 Units	12 Units	13 Units	20 Units	25 Units	30 Units
2017	\$ 125.98	\$ 5.31	\$ 125.98	\$ 131.29	\$ 147.22	\$ 157.84	\$ 168.46	\$ 173.77	\$ 210.94	\$ 237.49	\$ 264.04
% Change	-10%	-10%	-10%	-10%	-10%	-10%	-10%	-10%	-10%	-10%	-10%
\$ Change	\$ (14.00)	\$ (0.59)	\$ (14.00)	\$ 130.03	\$ (16.36)	\$ 17.86	\$ 28.48	\$ (19.31)	\$ (23.44)	\$ (26.39)	\$ (29.34)
2018	\$ 125.98	\$ 5.31	\$ 125.98	\$ 131.29	\$ 147.22	\$ 157.84	\$ 168.46	\$ 173.77	\$ 210.94	\$ 237.49	\$ 264.04
% Change	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
\$ Change	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2019	\$ 125.98	\$ 5.31	\$ 125.98	\$ 131.29	\$ 147.22	\$ 157.84	\$ 168.46	\$ 173.77	\$ 210.94	\$ 237.49	\$ 264.04
% Change	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
\$ Change	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2017 to 2019	3 year total	\$ 2,267.68	\$ 2,363.26	\$ 2,650.00	\$ 2,841.16	\$ 3,032.32	\$ 3,127.90	\$ 3,796.96	\$ 4,274.86	\$ 4,752.76	
2014 to 2016	3 year total	\$ 2,519.64	\$ 2,625.84	\$ 2,944.44	\$ 3,156.84	\$ 3,369.24	\$ 3,475.44	\$ 4,218.84	\$ 4,749.84	\$ 5,280.84	
\$ Change		\$ (251.96)	\$ (262.58)	\$ (294.44)	\$ (315.68)	\$ (336.92)	\$ (347.54)	\$ (421.88)	\$ (474.98)	\$ (528.08)	
% Change		-10.00%	-10.00%	-10.00%	-10.00%	-10.00%	-10.00%	-10.00%	-10.00%	-10.00%	-10.00%



Storm Water Enterprise Fund										9/9/2016			
Cashflow Analysis										Fund Balance and Reserve Designations			
Revenue Sources					Expenditures					Revenues			
										Over (Under)			
										Exp			
										Year			
										Estimated			
										Ending Fund			
										Balance			
										Reserves for			
										Operating			
										Debt			
										Capital			
										Reserves for			
										Capital			
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